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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/579,834	05/17/2006	Werner Bernhard	8009-88157	3629
42798	7590	04/02/2009		
FITCH, EVEN, TABIN & FLANNERY P. O. BOX 18415 WASHINGTON, DC 20036			EXAMINER ZANELLI, MICHAEL J	
			ART UNIT	PAPER NUMBER
			3661	
			MAIL DATE	DELIVERY MODE
			04/02/2009 PAPER	

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary

Application No.

10/579,834

Applicant(s)

BERNHARD, WERNER

Examiner

Michael J. Zanelli

Art Unit

3661

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 17 May 2006.
2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-24 is/are pending in the application.
4a) Of the above claim(s) _____ is/are withdrawn from consideration.
5) ☒ Claim(s) 20 is/are allowed.
6) ☒ Claim(s) 1-19 and 21-24 is/are rejected.
7) ☐ Claim(s) _____ is/are objected to.
8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☒ The specification is objected to by the Examiner.
10) ☒ The drawing(s) filed on 17 May 2006 is/are: a) ☐ accepted or b) ☒ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☒ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☒ Information Disclosure Statement(s) (PTO/S5108)
Paper No(s)/Mail Date 5/17/06
4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date _____
5) ☐ Notice of Informal Patent Application
6) ☐ Other: _____

DETAILED ACTION

1. This application has been examined. The preliminary amendment filed 5/17/06 has been entered. Claims 1-24 are pending.
2. Receipt is acknowledged of papers submitted under 35 U.S.C. 119(a)-(d), which papers have been placed of record in the file.
3. The IDS filed 5/17/06 has been considered.
4. The drawings are objected to because the blocks shown in Fig. 1 require descriptive legends.

Corrected drawing sheets in compliance with 37 CFR 1.121(d) are required in reply to the Office action to avoid abandonment of the application. Any amended replacement drawing sheet should include all of the figures appearing on the immediate prior version of the sheet, even if only one figure is being amended. The figure or figure number of an amended drawing should not be labeled as "amended." If a drawing figure is to be canceled, the appropriate figure must be removed from the replacement sheet, and where necessary, the remaining figures must be renumbered and appropriate changes made to the brief description of the several views of the drawings for consistency. Additional replacement sheets may be necessary to show the renumbering of the remaining figures. Each drawing sheet submitted after the filing date of an application must be labeled in the top margin as either "Replacement Sheet" or "New Sheet" pursuant to 37 CFR 1.121(d). If the changes are not accepted by the examiner, the applicant will be notified and informed of any required corrective action in the next Office action. The objection to the drawings will not be held in abeyance.

5. The disclosure is objected to because of the following informalities:

Headings are required for each of the sections of the specification. Appropriate correction is required.

6. The following is a quotation of the first paragraph of 35 U.S.C. 112:

The specification shall contain a written description of the invention, and of the manner and process of making and using it, in such full, clear, concise, and exact terms as to enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make and use the same and shall set forth the best mode contemplated by the inventor of carrying out his invention.

7. Claims 1, 3-7 and 9-14, are rejected under 35 U.S.C. 112, first paragraph, for undue breadth. Claim 1 sets forth a lane device having an evaluation means (note the claim does not explicitly claim that the distance sensor(s) are part of the lane device). Claim 13 sets forth a selector device having a selection means (note that the claim does not explicitly claim that the distance sensor(s), parking aid device and/or lane device are part of the selector device). As noted in MPEP 2164.08(a):

A single means claim, i.e., where a means recitation does not appear in combination with another recited element of means, is subject to an undue breadth rejection under 35 U.S.C. 112, first paragraph. In re Hyatt, 708 F.2d 712, 714-715, 218 USPQ 195, 197 (Fed. Cir. 1983) (A single means claim which covered every conceivable means for achieving the stated purpose was held nonenabling for the scope of the claim because the specification disclosed at most only those means known to the inventor.). When claims depend on a recited property, a fact situation comparable to Hyatt is possible, where the claim covers every conceivable structure (means) for achieving the stated property result while the specification discloses at most only those known to the inventor.

8. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

9. Claims 1-19 and 21-24 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

A. As per claim 1, the claim element "evaluation means" is a means (or step) plus function limitation that invokes 35 U.S.C. 112, sixth paragraph. However, the written description fails to disclose the corresponding structure, material, or acts for the claimed function. The specification merely discloses on page 9 that the functions are implemented using software and program code carried out by one or more processors. In cases involving a computer-implemented invention in which the applicant has invoked means-plus-function claiming, the structure disclosed in the specification must be more than simply a general purpose computer or microprocessor. To claim a means for performing a particular function and then to disclose only a general purpose computer with "appropriate" programming/software as the structure designed to perform that function amounts to pure functional claiming. Simply disclosing a computer as the structure designated to perform a particular function does not limit the scope of the claim to "the corresponding structure, material, or acts" that perform the function, as required by section 112, paragraph 6. The specification must disclose the particular algorithm that transforms the general purpose computer/microprocessor to a special purpose computer/microprocessor

programmed to perform the disclosed algorithm. Aristocrat Technologies v. International Game Technology, 86 USPQ2d 1235 (Fed. Cir. 2008).

Applicant is required to:

- (a) Amend the claim so that the claim limitation will no longer be a means (or step) plus function limitation under 35 U.S.C. 112, sixth paragraph; or
- (b) Amend the written description of the specification such that it expressly recites what structure, material, or acts perform the claimed function without introducing any new matter (35 U.S.C. 132(a)).

If applicant is of the opinion that the written description of the specification already implicitly or inherently discloses the corresponding structure, material, or acts so that one of ordinary skill in the art would recognize what structure, material, or acts perform the claimed function, applicant is required to clarify the record by either:

- (a) Amending the written description of the specification such that it expressly recites the corresponding structure, material, or acts for performing the claimed function and clearly links or associates the structure, material, or acts to the claimed function, without introducing any new matter (35 U.S.C. 132(a)); or
- (b) Stating on the record what the corresponding structure, material, or acts, which are implicitly or inherently set forth in the written description of the specification, perform the claimed function. For more information, see 37 CFR 1.75(d) and MPEP §§ 608.01(o) and 2181.

B. As per claim 1, the scope of the claim is indefinite because it recites both a broad limitation ("interference information") and a narrow limitation ("in particular by vehicle ... or discontinuities ..."). It is unclear whether the scope is to be limited to interference information in general or the specific causes recited.

C. As per claims 2 and 3, to avoid ambiguity replace "it" with the specific subject matter being referred to. The manner in which the claim is recited makes it unclear whether "it" is referring to the lane device as a whole or merely the evaluation means.

D. As per claim 4, the claim is unclear how the distance data is compared to stored lane data. It would appear that the lane data should be compared with stored lane data and the distance data compared with stored distance data.

E. As per claim 7, to avoid ambiguity replace "it" with the specific subject matter being referred to. The manner in which the claim is recited makes it unclear whether "it" is referring to the lane device as a whole or merely the evaluation means. The scope of the claim is also indefinite because it recites both a broad limitation ("wirefree locating system") and a narrow limitation ("in particular of an GPS system ... and/or ...optical detection system ..."). It is unclear whether the scope is to be limited to the broader or narrower limitation. Furthermore, the claim is unclear as to the nexus between the lane device as recited in claim 1 and the wireless locating system.

F. As per claim 9, the claim is unclear as to the nexus between the lane device as recited in claim 1 and the parking aid device.

G. As per claims 10 and 11, to avoid ambiguity replace "it" with the specific subject matter being referred to. The manner in which the claim is recited makes it unclear whether "it" is referring to the lane device as a whole or merely the evaluation means.

H. As per claim 12, to avoid ambiguity replace "it" with the specific subject matter being referred to. The manner in which the claim is recited makes it unclear whether "it" is referring to the lane device as a whole or merely the evaluation means. The scope of the claim is also indefinite because it recites both a broad limitation ("transverse control") and a narrow limitation ("in particular ... a steering intervention"). It is unclear whether the scope is to be limited to the broader or narrower limitation.

I. As per claim 13, the claim element "selection means" is a means (or step) plus function limitation that invokes 35 U.S.C. 112, sixth paragraph. However, the written description fails to disclose the corresponding structure, material, or acts for the claimed function. The additional comments noted above relative to claim 1 are incorporated herein by reference.

J. As per claims 15 and 16, to avoid ambiguity replace "it" with the specific subject matter being referred to. The manner in which the claim is recited makes it unclear whether "it" is referring to the lane device as a whole or merely the evaluation means.

K. As per claim 17, at line 1 the word "means" is preceded by the word "storage" in an attempt to use a "means" clause to recite a claim element as a

means for performing a specified function. However, since no function is specified by the word(s) preceding "means," it is impossible to determine the equivalents of the element, as required by 35 U.S.C. 112, sixth paragraph. See *Ex parte Klumb*, 159 USPQ 694 (Bd. App. 1967). Furthermore, the "means" seems to incorporate specific structure (i.e., lane device as defined in claim 1) and thus appears improper to invoke 35 U.S.C. 112, sixth paragraph.

L. As per claim 19, the claim provides for the use of a distance sensor but, since the claim does not set forth any steps involved in a method/process, it is unclear what method/process applicant is intending to encompass. A claim is indefinite where it merely recites a use without any active, positive steps delimiting how this use is actually practiced.

M. As per claim 21, to avoid ambiguity replace "it" with the specific subject matter being referred to. The manner in which the claim is recited makes it unclear whether "it" is referring to the lane device as a whole or merely the evaluation means. Furthermore, the claim is unclear as to the nexus between the selector device as recited in claim 13 and the processor.

N. As per claim 22, note comments above for claim 17.

O. As per claims 23 and 24, the scope of the claims are indefinite because they recite both a broad limitation ("vehicle") and a narrow limitation ("in particular a passenger vehicle"). It is unclear whether the scope is to be limited to the broader or narrower limitation. Further with regards to claim 24, see comments above for claims 17 and 22.

P. All claims depending from a rejected base claim are also rejected as containing the same deficiencies.

10. 35 U.S.C. 101 reads as follows:

Whoever invents or discovers any new and useful process, machine, manufacture, or composition of matter, or any new and useful improvement thereof, may obtain a patent therefor, subject to the conditions and requirements of this title.

11. Claim 19 is rejected under 35 U.S.C. 101 because the claimed recitation of a use, without setting forth any steps involved in the process, results in an improper definition of a process, i.e., results in a claim which is not a proper process claim under 35 U.S.C. 101. See for example *Ex parte Dunki*, 153 USPQ 678 (Bd.App. 1967) and *Clinical Products, Ltd. v. Brenner*, 255 F. Supp. 131, 149 USPQ 475 (D.D.C. 1966).

12. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

13. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

14. Claims 1, 5-8 and 16-18, as best interpreted given the deficiencies noted above, are rejected under 35 U.S.C. 102(b) as anticipated by or, in the alternative, under 35 U.S.C. 103(a) as obvious over JP 06-286539 (hereinafter D1).

- A. As per claim 1, D1 discloses a lane device for detecting a lane comprising an evaluation means for evaluating distance data provided by at least two sensors which detect a reference body (i.e., tunnel wall or parallel traveling vehicle) and filters out "interference information" by applying threshold values. The filtered distance data is used to provide an indication of whether the vehicle is in danger of deviating from its travel lane. See Abs; Fig. 2. The evaluation means may be embodied as a CPU programmed with the algorithms shown in Figs. 3 and 5.
- B. As per claims 5-8, as above whereby D1 utilizes distance sensors capable of measuring distance in low light situations (i.e., tunnels). The distance sensors are utilized when the optical (camera) detection system ("wireless locating system") cannot be used due to low light levels in the tunnel. The distance sensors are components of the lane device (Fig. 2).
- C. As per claims 16-18, as above whereby the vehicle-based lane device is configured to operate using a CPU executing software stored on a storage device.
15. Claims 13, 15, 19 and 21-24 rejected under 35 U.S.C. 103(a) as being unpatentable over Rao et al. (6,784,791).
- A. As per claims 13 and 19, Rao discloses a selector device comprising a selection means (programmed controller) for selecting distance data of at least one distance sensor as a function of vehicle velocity whereby the distance data is selected for a parking aid device at low velocity and selected for a collision

warning device at higher velocity (Fig. 1; Abs). Rao discloses the desirability of sharing distance sensors with various vehicle systems to reduce costs, minimize space requirements, minimize weight, etc. (col. 1:52 to col. 2:6). The claimed invention differs in that the selector device interacts with a parking device and a lane device. However, one of ordinary skill in the vehicle arts would have found it obvious to share the distance sensors amongst various other systems for the same desirable benefits noted above.

B. As per claim 15, as above whereby the selector device forms a component of at least the parking aid device.

C. As per claims 21-24, as above whereby the selector device is disposed on a vehicle and is embodied as a microprocessor programmed to execute software stored in a storage device (Fig. 4; col. 4:56-59).

16. Claim 20 is distinguishable over the prior art. As per claim 20, the prior art of record does not show or reasonably suggest, in combination with the other claimed subject matter, a method for detecting the lane of a vehicle which includes the steps of evaluating distance data containing information about a distance from a reference body which runs essentially continuously to the side of the lane, filtering out interference information caused by vehicles present in the region of the lane or discontinuities of the reference body, and acquiring lane data as a function of the filtered distance data.

17. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

18. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Michael J. Zanelli whose telephone number is (571) 272-6969. The examiner can normally be reached on Monday-Thursday 9:00 AM - 4:00 PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Thomas G. Black can be reached on (571) 272-6956. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/Michael J. Zanelli/
Primary Examiner
Art Unit 3661